



# Steep Hill Hawaii™

1150 S. KING STREET, HONOLULU, HI 96814 LICENSE #: 92630

## CERTIFICATE OF ANALYSIS

Sample Name: Hemp Oil-Paws  
Steep Hill ID: HI86731  
Batch ID: 1000400  
State ID:  
Sample Type: Tincture  
Date Received: 6/10/2020  
Date Reported: 6/13/2020  
Density: 0.930 g/mL

Customer: Hawaii Nexus

### OVERALL BATCH SUMMARY: **PASS**

Residual Pesticides	Microbial Impurities	Mycotoxins	Heavy Metals	Foreign Material	Residual Solvents
Pass	Pass	Pass	Pass	NT	Pass



**Total THC**  
0.0215 %  
0.215 mg/g  
0.200 mg/mL

**Total CBD**  
0.605 %  
6.05 mg/g  
5.63 mg/mL

**Total Cannabinoids**  
0.683 %  
6.83 mg/g  
6.35 mg/mL

Total THC = [THCA x 0.877] + [THC]  
Total CBD = [CBDA x 0.877] + [CBD]

Nelson Lazaga, Ph.D  
Laboratory Director  
Date: 6/13/2020

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## CERTIFICATE OF ANALYSIS

### Terpenoid Results

NT

Standard terpene analysis utilizing Liquid Chromatography – Mass Spectrometry (LC-MS; HI-SOP-024)

Analyte	%	mg/g	mg/mL	LOD mg/g	LOQ mg/g
α-Bisabolol	NT	NT	NT	NT	NT
Camphene	NT	NT	NT	NT	NT
3-Carene	NT	NT	NT	NT	NT
Caryophyllene Oxide	NT	NT	NT	NT	NT
β-Caryophyllene	NT	NT	NT	NT	NT
Eucalyptol	NT	NT	NT	NT	NT
Geraniol	NT	NT	NT	NT	NT
Guaiol	NT	NT	NT	NT	NT
Humulene	NT	NT	NT	NT	NT
p-Isopropyltoluene	NT	NT	NT	NT	NT
Isopulegol	NT	NT	NT	NT	NT
Limonene	NT	NT	NT	NT	NT
Linalool	NT	NT	NT	NT	NT
β-Myrcene	NT	NT	NT	NT	NT
Nerolidol	NT	NT	NT	NT	NT
Ocimene	NT	NT	NT	NT	NT
α-Pinene	NT	NT	NT	NT	NT
β-Pinene	NT	NT	NT	NT	NT
α-Terpinene	NT	NT	NT	NT	NT
γ-Terpinene	NT	NT	NT	NT	NT
Terpinolene	NT	NT	NT	NT	NT
Total	NT	NT	NT	NT	NT

### Microbial Impurities Results

Pass

6/13/2020

Microbiological screening utilizing PathogenDx and TEMPO (HI-SOP-008 + HI-SOP-007) - Limit units: CFU/g

Analyte	Pass/Fail	Result	Limit	LOQ
Aspergillus flavus	Pass	ND	ND	Not Detected in 1 gram
Aspergillus fumigatus	Pass	ND	ND	Not Detected in 1 gram
Aspergillus niger	Pass	ND	ND	Not Detected in 1 gram
Salmonella	Pass	ND	ND	Not Detected in 1 gram
Aerobic	Pass	<100	10000	1 CFU/g
Coliform	Pass	<100	100	1 CFU/g
Enterobacteria	Pass	<100	100	1 CFU/g
General E. coli	Pass	<1	ND	1 CFU/g
Yeast & Mold	Pass	<100	1000	1 CFU/g

### Moisture Results

NT

Moisture content analysis utilizing Moisture Balance (MB; HI-SOP-033) - Limit units: %

Analyte	Pass/Fail	%	Limit
Moisture	NT	NT	

### Foreign Material Results

NT

Foreign material analysis utilizing visual inspection with 10x magnification (HI-SOP-016)

Analyte	Pass/Fail
Visual Inspection	NT

### Cannabinoid Results

6/12/2020

Standard potency analysis utilizing Ultra High Performance Liquid Chromatography (UHPLC; HI-SOP-024)

Analyte	%	mg/g	mg/mL	LOD mg/g	LOQ mg/g
CBC	NT	NT	NT	NT	NT
CBD	0.261	2.61	2.43	0.0368	0.0386
CBDA	0.393	3.93	3.65	0.0368	0.0662
CBDV	NT	NT	NT	NT	NT
CBDVA	NT	NT	NT	NT	NT
CBG	0.00734	0.0734	0.0683	0.0368	0.0423
CBGA	NT	NT	NT	NT	NT
CBN	ND	ND	ND	0.0368	0.0368
THC	0.0215	0.215	0.200	0.0368	0.0368
delta-8-THC	NT	NT	NT	NT	NT
THCA	ND	ND	ND	0.0368	0.0846
THCV	NT	NT	NT	NT	NT
THCVA	NT	NT	NT	NT	NT
Total	0.683	6.83	6.35		

LOD: Limit of Detection  
 LOQ: Limit of Quantitation  
 NT: Not Tested  
 ND: Not Detected

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## CERTIFICATE OF ANALYSIS

### Residual Pesticides Results

Pass

6/13/2020

Residual pesticide analysis utilizing Liquid Chromatography – Mass Spectrometry (LC-MSMS; HI-SOP-025) - Limit units: ug/g = ppm

Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g	Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g
Abamectin B1a	Pass	ND	1	0.234	0.708	Imazalil	Pass	ND	1	0.0457	0.138
Acephate	Pass	ND	1	0.0667	0.202	Imidacloprid	Pass	ND	1	0.0662	0.201
Acequinocyl	Pass	ND	1	0.00340	0.920	Kresoxim-methyl	Pass	ND	1	0.0626	0.190
Acetamiprid	Pass	ND	1	0.111	0.335	Malathion	Pass	ND	1	0.0572	0.173
Aldicarb	Pass	ND	1	0.0367	0.111	Metalaxyl	Pass	ND	1	0.0548	0.166
Azoxystrobin	Pass	ND	1	0.0851	0.258	Methiocarb	Pass	ND	1	0.0934	0.283
Bifenazate	Pass	ND	1	0.0982	0.298	Methomyl	Pass	ND	1	0.0364	0.110
Bifenthrin	Pass	ND	1	0.192	0.583	Methyl Parathion	Pass	ND	1	0.139	0.420
Boscalid	Pass	ND	1	0.201	0.608	MGK-264	Pass	ND	1	0.182	0.550
Carbaryl	Pass	ND	1	0.0388	0.118	Myclobutanil	Pass	ND	1	0.0563	0.171
Carbofuran	Pass	ND	1	0.0272	0.0826	Naled	Pass	ND	1	0.0519	0.157
Chlorantraniliprole	Pass	ND	1	0.0835	0.253	Oxamyl	Pass	ND	1	0.0361	0.109
Chlorfenapyr	Pass	ND	1	0.0359	0.109	Paclobutrazol	Pass	ND	1	0.0366	0.111
Chlorpyrifos	Pass	ND	1	0.0821	0.249	Permethrin	Pass	ND	1	0.249	0.755
Clofentezine	Pass	ND	1	0.155	0.470	Phosmet	Pass	ND	1	0.129	0.392
Cyfluthrin	Pass	ND	1	0.386	0.920	Piperonyl Butoxide	Pass	ND	1	0.0423	0.128
Cypermethrin	Pass	ND	1	0.246	0.745	Prallethrin	Pass	ND	1	0.0768	0.233
Diazinon	Pass	ND	1	0.0325	0.0984	Propiconazole	Pass	ND	1	0.0783	0.237
Dichlorvos	Pass	ND	1	0.165	0.500	Propoxur	Pass	ND	1	0.0286	0.0868
Dimethoate	Pass	ND	1	0.0457	0.138	Pyrethrins	Pass	ND	1	0.0366	0.111
Ethoprophos	Pass	ND	1	0.0867	0.263	Pyridaben	Pass	ND	1	0.195	0.590
Etofenprox	Pass	ND	1	0.224	0.680	Spinosad	Pass	ND	1	0.0306	0.0928
Etoxazole	Pass	ND	1	0.0462	0.140	Spiromesifen	Pass	ND	1	0.0579	0.176
Fenpyroximate	Pass	ND	1	0.00136	0.00414	Spirotetramat	Pass	ND	1	0.0492	0.149
Fipronil	Pass	ND	1	0.104	0.316	Tebuconazole	Pass	ND	1	0.0748	0.227
Flonicamid	Pass	ND	1	0.0891	0.270	Thiacloprid	Pass	ND	1	0.0572	0.173
Fludioxonil	Pass	ND	1	0.0575	0.174	Thiamethoxam	Pass	ND	1	0.0383	0.116
Hexythiazox	Pass	ND	1	0.204	0.619	Trifloxystrobin	Pass	ND	1	0.0372	0.113

### Mycotoxin Results

Pass

6/13/2020

Mycotoxin analysis utilizing Liquid Chromatography – Mass Spectrometry (LC-MS; HI-SOP-025) - Limit units: ug/kg = ppb

Analyte	Pass/Fail	ug/kg	Limit	LOD ug/kg	LOQ ug/kg
Aflatoxin B1		ND		4.77	14.5
Aflatoxin B2		ND		4.38	13.3
Aflatoxin G1		ND		4.54	13.7
Aflatoxin G2		ND		6.56	19.9
Ochratoxin A	Pass	ND	<20	8.45	25.6
Total Aflatoxins	Pass	ND	<20	6.56	19.9

### Heavy Metals Results

Pass

6/13/2020

Heavy metals analysis utilizing Atomic Absorption Spectroscopy (AAS; HI-SOP-015) - Limit units: ug/g = ppm

Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g
Arsenic	Pass	< LOQ	10	0.00156	1.63
Cadmium	Pass	< LOQ	4	0.0000130	1.63
Lead	Pass	ND	6	0.00189	1.63
Mercury	Pass	< LOQ	2	0.00140	1.63

### Residual Solvents Results

Pass

6/11/2020

Residual solvents and processing chemicals analysis utilizing Headspace Gas Chromatography – Mass Spectrometry (HS-GC-MS; HI-SOP-010) - Limit units: ug/g = ppm

Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g	Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g
Acetone		ND		3.62	5.40	Isobutane		ND		0.473	0.540
Acetonitrile		ND		0.256	0.540	Isopropanol		ND		3.63	5.40
Benzene	Pass	ND	1	0.253	0.540	Methanol		ND		0.496	0.540
Butanes	Pass	ND	800	0.250	0.540	n-Pentane		1.22		0.255	0.540
Chloroform		ND		0.257	0.540	Tetrahydrofuran		ND		0.491	0.540
Ethanol		< LOQ		3.62	5.40	Toluene	Pass	ND	1	0.253	0.540
Heptanes	Pass	ND	500	6.52	10.8	Total Xylenes	Pass	ND	1	0.251	0.540
n-Hexane	Pass	ND	10	0.469	0.540						

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